CRFG- CENTRAL COAST CHAPTER

CHILLING HOURS ON THE CENTRAL COAST

Linda Robertson

Winter chilling hours are a big issue for people growing fruit trees on the central coast. Getting enough winter cold is crucial for deciduous fruit trees, including apples, pears, stone fruits, and nuts. It is also important for berries and some exotic fruits, such as feijoas (pineapple guavas).

> Deciduous fruit and nut trees enter a dormant, or "rest" period after leaf fall. Trees are kept in dormancy due to natural growth inhibitors. These natural inhibitors prevent growth from beginning during atypical periods of warm winter weather. Dormancy is broken in the spring when sufficient cold temperature breaks down these natural growth inhibitors within the tree. A specific number of total hours of chilling (temperatures between 32°F and 45°F) are required to break dormancy. The total number of hours varies with variety, even within species. Plants that do not get adequate chilling leaf out later in the season (delayed foliation), have a prolonged blossoming period, buds may deteriorate and drop, and few, if any, flowers are produced. Without flowers, there is no fruit![1]

There are several methods used by plant scientists to estimate the number of chilling hours in a given area, but generally, the number of hours below 45°F between mid-November and mid-February is a fair index of the adequacy of winter chilling. Charts are available online of year-over-year chilling hours for different areas of the state and county, for example the U.C Agriculture and Natural Resources site, https://ucanr.edu/chillcalc/?controller=station&action=index. Even so, calculating chilling hours is not an exact science, nor is determining the number of chilling hours a particular variety needs to produce well. Statements of required chill hours are always approximations. A lot depends on the particular conditions of the area: even in coastal San Luis Obispo county, people who live in the canyons, where winter temperatures are low for extended periods, can grow higher-chill apples and stone fruit that won't fruit well in areas more exposed to the influence of the ocean, where the number of hours below 45 degrees is far lower. And in areas with a lot of fog, it can be a challenge to get enough summer heat to produce good fruit. In general, if you live in a coastal area with mild winters, a good rule of thumb is to look for varieties that require 400 chilling hours or less.

On the following pages is a list of some low-chill fruit, nut, and berry varieties for the

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[1] University of California Agriculture and Natural Resources, Suggested Fruit and Nut Varieties For San Luis Obispo and Santa Barbara Counties Backyard Orchardists. https://ucanr.edu/sites/mgslo/files/318637.pdf

central coast, based on published reports and the observations of local backyard growers, with links to some additional sources for information on low-chill varieties.

This is not an exhaustive list, and plant scientists continue to develop new varieties for different growing conditions.

LOW-CHILL FRUIT VARIETIES FOR CALIFORNIA'S CENTRAL COAST

ALMONDS
Garden Prince Dwarf
Ne Plus Ultra

APPLES
Anna
Yellow Bellflower
Beverly Hills
Braeburn
Fuji
Dorsett Golden
Ein Shemer
Gordon
Pettingill
Pink Lady
Tropical Beauty
Valmore
Winter Banana
Winter Pearmain

APRICOTS
Autumn Royal
Early Golden
Gold Kist
Katy

AVOCADOS
(All are low-chill; most are frost-tender; these are some varieties that are successfully grown in this area.)
Anaheim
Duke
Fuerte
Hass
Jim
Littlecado
Mexicola
Pinkerton
Reed
Stewart
Zutano

BLACKBERRIES
Erect-type:
- Arapaho
- Cherokee
- Triple Crown

Trailing:
- Boysen
- Marion
- Ollalie
- Silvan

BLACK RASPBERRIES
Bristol
Cumberland

CHERRIES
Lapin
Minnie Royal
Rainier
Royal Lee
Stella

CITRUS
All citrus is low- or no-chill. All are frost-sensitive, some more so than others.
Mandarins, lemons, and Bearss limes

grow and fruit well in coastal areas with little or no frost.

Many grapefruit and orange varieties require more heat to sweeten than our coastal climate provides. But there are some varieties that produce very good fruit in coastal areas, for example:

Robertson navel orange
Valencia orange
Washington navel orange

Oroblanco grapefruit

FIGS (in general, figs are also low chill fruit, and while they don't survive in cold-winter climates, they can be grown here both on the coast and inland. Many varieties need more heat and a longer hot season than coastal regions can provide in order to produce good fruit. These are some varieties that work well in the coastal climate.)
Adriatic
Black Jack
Black Mission
Brown Turkey
Conadria
Desert King
Italian 215
Osborn's Prolific
Violette de Bordeaux
White Genoa

GRAPES
Flame seedless
Thompson Seedless
Muscat (seeded)

NECTARINES
Desert Dawn
Desert Delight
Panamint
Rose
Snow Queen

PEACHES
August Pride
Babcock
Bonita
Desert Gold
Donut
Early Amber
Earligrande
Eva's Pride
Flordagrande
Flordaprince
Mid Pride
Red Baron
Saturn
Tropic Berta
Tropic Sweet

PEARS, ASIAN
Most varieties, including
Hosui
Nintaka
Shinko
Twentieth Century (Nijisseiki)
Tsu Li
Ya Li

PEARS, EUROPEAN
Ayers
Baldwin
Bartlett
Comice
Florida Home
Garber
Hood
Keiffer
Warren

PERSIMMONS
All fuyus
All hachiyas

PLUMS
Beauty

Burgundy
El Dorado
Kelsey
Mariposa
Santa Rosa
Satsuma

POMEGRANATES (most need some summer heat to develop sweetness)
Eversweet (a variety developed for coastal climates by a grower in Camarillo)
Parfianka
Crab
Early Wonderful
Wonderful

QUINCE
Orange
Pineapple
Smyrna

RASPBERRIES
Anne
Autumn Bliss
Bababerry
Caroline
Dinkum
Heritage
Kiwi Gold
September
Summit
Willamette

STRAWBERRIES
Short-day:
- Douglas
- Chandler
- Sequoia

Day-neutral:
- Selva
- Muir
- Fern
- Hecker

WALNUTS
Chandler
Lompoc

Additional resources:

https://ceventura.ucanr.edu/Com_Ag/Subtropical/Fruit_and_Nut_Varieties/Deciduous/

https://www.davewilson.com/img/content/dwn-low-chill-varieties.pdf

https://www.davewilson.com/home-garden/fruit-variety-recommendations/toms-picks-winners-low-chill-southwest/